INTERNATIONAL JOURNAL OF RESEARCH AND SCIENTIFIC INNOVATION (IJRSI)
ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue VIII August 2026

# Moderating Effect of Financing Dynamics on the Relationship between Supply Chain Management Functions and Operational Performance of the Uganda Police Force

**[1]Elem Kizito, [2]Dr. Moses Oginda, [3]Dr. Beatrice Abong'o**

**[1]PhD Student Department of Management Science, School of Business and Economics Maseno University**

**[2]Lecturer Department of Management Science, School of Business and Economics Maseno University**

**[3]Lecturer Department of Business Administration, School of Business and Economics Maseno University**

**DOI: https://doi.org/10.51244/IJRSI.2026.1308000007**

**Received: 16 August 2026; Accepted: 21 August 2026; Published: 25 August 2026**

## ABSTRACT

According to the Uganda Police Force (UPF) Annual Crime Reports (2018–2023), crime increased by 15%, crime clearance rates declined from 60.8% to 60.3%, and average emergency response time remained at 45 minutes compared to the global benchmark of 15 minutes. While these performance challenges may arise from multiple organizational, operational, and environmental factors, effective supply chain management functions remain critical in facilitating timely deployment of resources and service delivery. Existing studies on supply chain management have not adequately addressed the UPF context and have given limited attention to financing dynamics as a moderating variable. This study examined the moderating effect of financing dynamics on the relationship between supply chain management functions and operational performance of the Uganda Police Force. Guided by the Resource-Based View theory, the study adopted a positivist philosophy and a quantitative approach using a correlational research design. The target population comprised 10,141 police officers from regional police headquarters and divisions within Uganda's four major cities. A sample of 370 respondents was selected using stratified sampling, while a pilot study was conducted among 50 officers. Data were collected using a structured questionnaire and analyzed using Pearson correlation and hierarchical regression. Reliability results yielded Cronbach's alpha coefficients ranging from 0.80 to 0.85. The findings revealed that financing dynamics significantly moderated the relationship between supply chain management functions and operational performance (interaction $\beta = 0.342$, $\Delta R^2 = 0.092$, $p < 0.05$), indicating that the positive effect of supply chain management functions is strengthened when adequate financial resources are available. The study extends the Resource-Based View by demonstrating that financing dynamics function as a strategic enabling resource that enhances the effectiveness of supply chain management functions in improving operational performance.

### 1.1 Background of the Study

Operational performance in public security institutions depends on the ability to mobilize, deploy and sustain the resources required to deliver timely and effective services (Maguire, 2003; Sparrow, 2015). In the Uganda Police Force (UPF), supply chain management functions (SCMF), particularly transportation, warehousing and inventory management, determine the availability, movement, storage and distribution of resources required for policing activities (Chopra & Meindl, 2016; Richey et al., 2022). However, the effectiveness of SCMF may depend not only on the quality of supply chain processes but also on the availability and management of financial resources required to implement them (Wetzel & Hofmann, 2019; Lou et al., 2024). Financing dynamics (FD), encompassing the adequacy, allocation, sources and timeliness of financial resources, can therefore determine the extent to which SCM capabilities are translated into operational performance (Sarpong & Oppong, 2023; Lou et al., 2024).

The importance of financing to the effectiveness of SCMF is particularly significant in public institutions because supply chain activities require continuous financial commitments for procurement, transportation, maintenance, warehousing, inventory replenishment and information systems (Chopra & Meindl, 2016; Richey et al., 2022). Financial constraints can restrict an organization's ability to acquire and maintain operational resources, while timely and adequate financing can enable organizations to exploit their supply chain capabilities more effectively (Wetzel & Hofmann, 2019; Lou et al., 2024). Evidence from 740 Chinese listed firms observed between 2010 and 2017 showed that financing constraints were widespread and that supply chain finance significantly alleviated such constraints, particularly among private, innovative and geographically constrained firms (Lou et al., 2024). Similarly, evidence from A-share listed firms in China covering 2011–2022 found that financing constraints weakened supply chain resilience, demonstrating that financial conditions can constrain the ability of organizations to sustain supply-chain capabilities (Li et al., 2024). These findings suggest that the availability of financial resources is not merely an independent determinant of organizational outcomes but may condition the extent to which supply-chain capabilities generate performance improvements (Li et al., 2024; Lou et al., 2024).

The Ugandan public-sector context demonstrates why this financing condition warrants particular attention in the UPF. Government data indicate that the UPF budget increased from UGX 525.77 billion in 2016/17 to UGX 900.72 billion in 2020/21, representing a 71% increase, while expenditure absorption reached approximately 99% of released funds during the period (Ministry of Finance, Planning and Economic Development [MoFPED], 2021). Despite this substantial increase in financial allocations, government assessments continued to identify operational and logistical constraints affecting police service delivery, including the need for improved facilitation and infrastructure (MoFPED, 2021). This suggests that the relationship between financial resources and operational outcomes may depend not simply on the amount allocated but also on how financial resources are allocated, released and converted into operational capabilities (MoFPED, 2021; Wetzel & Hofmann, 2019).

The continuing operational demands of the UPF further reinforce the importance of examining the interaction between SCMF and FD. Uganda recorded 231,653 reported crimes in 2022, representing an 18% increase from 196,081 cases recorded in 2021, while 136,499 cases remained under inquiry at the end of 2022 (Uganda Police Force [UPF], 2023). In 2023, the Force recorded 228,074 reported crimes, indicating a 1.5% reduction from the previous year, but the scale of reported cases continued to place substantial demands on police operational capacity (UPF, 2024). Police operational effectiveness therefore requires continuous availability and deployment of vehicles, equipment, supplies and other operational resources, all of which depend on functioning SCM systems and sustained financial support (Sparrow, 2015; UPF, 2024).

The potential moderating role of FD can be explained by the distinction between a direct relationship and a conditional relationship between organizational capabilities and performance. A moderator is a variable that changes the strength or direction of the relationship between an independent and dependent variable (Baron & Kenny, 1986). In this study, SCMF represents the organizational capability through which transportation, warehousing and inventory resources are mobilized and managed, while OP represents the efficiency and effectiveness of police operations (Richey et al., 2022; Sparrow, 2015). FD is expected to strengthen the SCMF–OP relationship when financial resources are adequate, appropriately allocated and released on time because such conditions enable the UPF to operationalize supply-chain capabilities (Sarpong & Oppong, 2023; Lou et al., 2024). Conversely, inadequate, poorly allocated or delayed financing may weaken the relationship because supply-chain capabilities cannot be fully utilized when the resources required for their implementation are constrained (Wetzel & Hofmann, 2019; Li et al., 2024).

There is empirical support for the proposition that financial-resource availability can condition the effect of supply-chain practices on organizational outcomes. Sarpong and Oppong (2023), using data from manufacturing firms in Kumasi, Ghana, found that financial resource availability significantly moderated the relationship between green supply chain management and environmental performance, with the interaction effect reported as statistically significant ($p = .02$) and the model explaining approximately 68% of the variance in the outcome. Although their study examined environmental rather than police operational performance, the finding provides direct evidence that financial-resource availability can alter the strength of a supply-chain–performance relationship (Sarpong & Oppong, 2023). Similarly, research on supply-chain finance has demonstrated that financial constraints influence the capacity of organizations to sustain supply-chain activities and achieve desirable outcomes (Wetzel & Hofmann, 2019; Lou et al., 2024).

Despite this evidence, a conceptual gap remains because financing has more frequently been examined as a direct constraint, an antecedent or a mechanism through which supply-chain finance affects organizational outcomes rather than explicitly as a moderator of the SCMF–OP relationship (Wetzel & Hofmann, 2019; Lou et al., 2024). Existing research has demonstrated that financing constraints affect supply-chain resilience and that supply-chain finance can alleviate financial constraints, but these studies do not directly establish whether the level of financing changes the strength of the relationship between conventional SCMF and operational performance (Li et al., 2024; Lou et al., 2024). The absence of this interaction perspective limits understanding of the conditions under which SCMF produce stronger or weaker operational outcomes (Baron & Kenny, 1986; Sarpong & Oppong, 2023).

An empirical gap also exists because studies linking financing and supply-chain performance have predominantly examined commercial enterprises, manufacturing firms and listed companies rather than public security institutions (Sarpong & Oppong, 2023; Lou et al., 2024). For example, Lou et al. (2024) examined 740 Chinese listed firms, while Sarpong and Oppong (2023) investigated manufacturing firms in Kumasi, Ghana, leaving limited evidence on whether financial-resource availability conditions the SCMF–OP relationship within government institutions. This is important because public organizations operate under different financial-management arrangements, including budget appropriations, expenditure controls and government fund-release procedures, which can influence the implementation of supply-chain activities differently from private firms (MoFPED, 2021).

A contextual gap is therefore evident in Uganda's law-enforcement environment because evidence concerning the financing–SCM–performance relationship remains limited within the UPF despite the Force's substantial financial requirements and continuing operational challenges (MoFPED, 2021; UPF, 2023, 2024). Existing evidence from Uganda demonstrates that police financing and logistical capacity remain important components of service delivery, but it does not sufficiently establish whether financing conditions strengthen or weaken the contribution of SCMF to operational performance (MoFPED, 2021). Consequently, findings derived from Chinese listed firms, manufacturing firms in Ghana and other commercial organizations cannot automatically be generalized to the UPF because their financing structures, accountability systems and operational mandates differ substantially (Sarpong & Oppong, 2023; Lou et al., 2024).

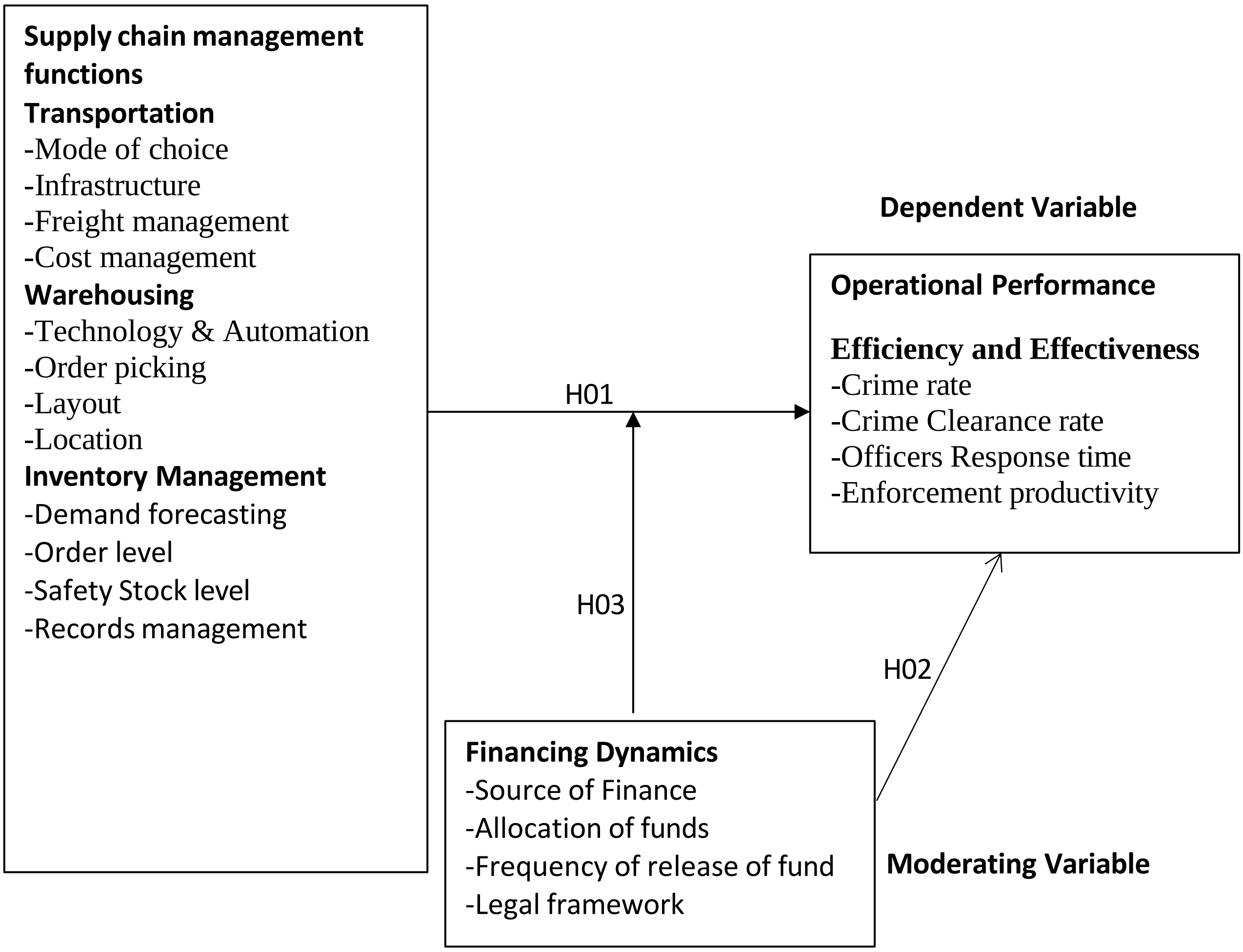
A further methodological gap arises from the predominance of direct-effect and mediation analyses in supply-chain-finance research, compared with the relatively limited application of moderation models examining financial conditions as boundary conditions of supply-chain–performance relationships (Baron & Kenny, 1986; Lou et al., 2024). This limits the ability of existing research to answer whether improvements in SCMF produce consistently similar operational benefits under different levels of financial adequacy, allocation efficiency and timeliness (Sarpong & Oppong, 2023; Li et al., 2024). Testing FD as a moderator therefore provides a more nuanced explanation of the SCMF–OP relationship by determining whether financial conditions amplify or constrain the operational value of supply-chain capabilities (Baron & Kenny, 1986; Sarpong & Oppong, 2023).

Accordingly, the present study addresses these conceptual, empirical, contextual and methodological gaps by examining the moderating effect of financing dynamics on the relationship between supply chain management functions and operational performance of the Uganda Police Force. The study specifically recognizes that effective transportation, warehousing and inventory management may improve police operational performance, but that the magnitude of this effect may depend on whether the UPF has adequate, appropriately allocated and timely financial resources to implement and sustain these functions (Richey et al., 2022; Sarpong & Oppong, 2023; Lou et al., 2024). The investigation therefore shifts the focus from asking only whether SCMF influence operational performance to determining under what financial conditions SCMF are more or less effective in producing improved operational outcomes (Baron & Kenny, 1986; Sarpong & Oppong, 2023).

## Problem Statement

Despite efforts by the Uganda Police Force (UPF) to strengthen its supply chain management (SCM) functions through improved transportation, warehousing, inventory systems and increased resource allocation, significant operational performance challenges persist. Between 2018 and 2023, reported crime increased by 15%, the crime clearance rate declined from 60.8% to 60.3%, while average response time remained at approximately 45 minutes, compared with the 15-minute global benchmark. These outcomes suggest that improvements in SCM functions have not consistently translated into the expected improvements in operational performance. The problem is further complicated by financing constraints within the security sector. Inadequate and delayed financing can constrain procurement, vehicle maintenance, inventory replenishment and warehouse operations, thereby limiting the extent to which SCM functions can contribute to operational performance. The existing literature has largely examined SCM functions and financing as separate determinants of organizational performance, with limited attention to whether financing conditions strengthen or weaken the relationship between SCM functions and operational performance. Moreover, much of the available evidence is drawn from private-sector and developed-country contexts, providing limited empirical evidence on this relationship within public-sector law-enforcement institutions in developing countries. Consequently, there remains insufficient empirical evidence on the moderating role of financing dynamics in the relationship between SCM functions and operational performance of the UPF. This study therefore examines whether financing dynamics significantly strengthen or weaken the effect of SCM functions on the operational performance of the Uganda Police Force.

Conceptual Framework



# THEORETICAL REVIEW

## Theoretical Framework

The Resource-Based View (RBV), articulated by Wernerfelt (1984) and Barney (1991), posits that organizational performance depends on the acquisition, development and effective utilization of valuable resources and capabilities. Barney (1991) argues that resources that are valuable, rare, difficult to imitate and non-substitutable can provide organizations with sustained advantages. In the context of the Uganda Police Force (UPF), supply chain management functions (SCMF), particularly transportation, warehousing and inventory management, constitute important organizational resources and capabilities that can enhance operational efficiency and effectiveness. However, the RBV also implies that the possession of resources alone does not guarantee superior performance; organizations must possess the capacity and complementary resources required to deploy and utilize them effectively (Barney, 1991; Wernerfelt, 1984).

This perspective is particularly relevant to examining the moderating role of financing dynamics (FD) in the relationship between SCMF and operational performance (OP). Although transportation, warehousing and inventory management represent important operational capabilities, their contribution to performance depends on the availability of financial resources required to acquire, maintain and utilize them. Adequate financing enables the UPF to maintain vehicles, replenish inventories, improve warehouse facilities, acquire logistics technologies and sustain supply chain operations. Conversely, inadequate or delayed financing may constrain the utilization of these resources and consequently weaken their contribution to operational performance. Thus, financing dynamics can be viewed as an important complementary resource that determines the extent to which SCM capabilities can be transformed into improved operational outcomes.

The RBV therefore provides a basis for conceptualizing FD as a boundary condition in the SCMF–OP relationship. Where financing is adequate, appropriately allocated and released in a timely manner, the UPF is more capable of exploiting its SCM resources and converting them into improved operational performance. For example, effective transportation systems are unlikely to improve police responsiveness when vehicles cannot be maintained or fuelled; similarly, effective inventory and warehousing systems may fail to support police operations when funds for replenishment, storage and distribution are inadequate. Financing dynamics therefore determine the extent to which the value embedded in SCMF can be realized. In this respect, the effect of SCMF on OP is expected to be stronger under favourable financing conditions and weaker under constrained financing conditions.

A key strength of RBV in this study is its ability to explain how internally controlled resources and organizational capabilities contribute to performance. The theory moves beyond viewing SCMF as routine administrative activities and recognizes transportation, warehousing and inventory management as capabilities that can create operational value when appropriately developed and deployed (Barney, 1991). Nevertheless, RBV has been criticized for giving insufficient attention to external environmental conditions and the constraints that may affect an organization's ability to acquire and exploit resources. This limitation is particularly relevant to public-sector organizations such as the UPF, where the availability and utilization of financial resources are influenced by government budgeting, allocation, disbursement and financial-control arrangements. Consequently, incorporating FD as a moderator extends the application of RBV by recognizing that the value of organizational capabilities may depend on the financial conditions under which those capabilities are deployed.

The RBV is therefore particularly congruent with the moderation objective of this study because it provides a theoretical explanation for why SCMF may not have a uniform effect on operational performance under all financial conditions. The theory suggests that SCMF constitute valuable organizational capabilities, while financing dynamics provide the complementary resources necessary for their effective deployment. Accordingly, adequate and timely financing is expected to strengthen the capacity of transportation, warehousing and inventory management to enhance police operational performance, whereas inadequate or delayed financing is expected to weaken this effect (Barney, 1991; Wernerfelt, 1984).

Other theories, including Transaction Cost Economics (TCE) and Systems Theory, may provide complementary explanations of SCM and organizational performance. TCE emphasizes the reduction of transaction and

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue VIII August 2026

coordination costs, while Systems Theory emphasizes the interdependence of organizational components. However, RBV provides a stronger theoretical foundation for the present moderation objective because it directly explains how organizational resources and capabilities generate performance and how complementary resources can determine the extent to which those capabilities are effectively exploited. Therefore, RBV provides the theoretical basis for examining whether financing dynamics strengthen or weaken the relationship between supply chain management functions and operational performance of the Uganda Police Force.

Empirical Review

Makttoof et al. (2022) found that funding availability, allocation and frequency of fund release significantly influenced the performance of government service institutions, demonstrating the importance of stable financing for effective operations. Similarly, Cheng et al. (2024) found that dynamic capabilities enhanced the benefits of supply chain finance and improved supply chain effectiveness, while Beka Be Nguema et al. (2022), using data from 210 Chinese companies, found that supply chain finance reduced supply chain risk, which subsequently improved organizational performance.

Evidence also indicates that financing conditions can influence the effectiveness of supply-chain capabilities. Maseko and Manyani (2019) found that effective financial management significantly enhanced the effect of supply chain strategies on operational performance, while Smith and Tan (2021) reported that financing dynamics moderated the relationship between SCM functions and operational performance among Australian technology firms. Wang and Zhang (2022) similarly found that financing structures significantly influenced the extent to which supply chain agility translated into operational performance, while Sharma and Gupta (2023) found that effective financing strategies strengthened the positive effect of supply chain integration on operational performance.

However, substantial contextual and conceptual gaps remain. Zhe (2023) and Beka Be Nguema et al. (2022) focused mainly on Chinese SMEs and commercial organizations, while Okoro and Babalola (2023) examined Nigeria's agricultural sector, limiting applicability to public-sector law enforcement. More importantly, existing studies have not adequately examined financing source, allocation efficiency, frequency of fund release and financing legal frameworks as specific dimensions moderating the SCMF–OP relationship. The reviewed literature has also frequently examined financing as a direct effect or mediator rather than as a moderator, with limited evidence from the Uganda Police Force.

## METHODOLOGY

The study adopted a positivist research philosophy and a quantitative approach using a correlational research design to examine the moderating effect of financing dynamics on the relationship between supply chain management functions (SCMF) and operational performance (OP) of the Uganda Police Force (UPF). The correlational design was appropriate because it enabled statistical examination of the strength and direction of relationships among SCMF, financing dynamics and operational performance without manipulating the study variables. The study was conducted in Kampala Metropolitan, Gulu, Mbarara and Mbale cities, representing the central, northern, western and eastern regions of Uganda, respectively.

The target population comprised 10,141 police officers drawn from regional police headquarters and police divisions within the four study cities, based on the UPF Manpower Audit Report (2025). The population included officers at different managerial and operational levels who were considered knowledgeable about SCM functions, financing and operational performance. A sample size of 370 respondents was determined using the Krejcie and Morgan (1970) finite population formula at a 95% confidence level and 5% margin of error. The study employed proportionate stratified sampling, whereby respondents were stratified according to policing regions and divisions, followed by simple random sampling within the respective strata. Of the 370 respondents, 24 were allocated to regional headquarters and 346 to police divisions.

Primary quantitative data were collected using a structured questionnaire measured on a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The questionnaire measured SCMF through transportation, warehousing and inventory management; financing dynamics through source of finance, allocation of funds, frequency of release and legal framework; and operational performance through crime rate, crime clearance rate, officers' response time and enforcement productivity. A pilot study involving 70 police officers, excluded from the final sample, was conducted to establish the reliability and validity of the instrument. Cronbach's Alpha coefficients ranged from 0.80 to 0.85, exceeding the recommended threshold of 0.70. Construct validity was established through Principal Component Analysis (PCA), which produced factor loadings ranging from 0.75 to 0.84, a KMO of 0.86, significant Bartlett's Test ($\chi^2 = 2240.52$, $p < .001$) and 72% total variance explained.

Data were analyzed using SPSS Version 26. Descriptive statistics, including frequencies, percentages, means and standard deviations, were used to summarize the data, while Pearson correlation and regression analyses were employed for inferential analysis. Hierarchical multiple regression was specifically used to test the moderating effect of financing dynamics. SCMF was entered first, financing dynamics was subsequently introduced, and finally the interaction term between SCMF and financing dynamics was entered. The moderation model was specified as: $Y = \beta_0 + \beta_1 X + \beta_2 M + \beta_3 (X \times M) + \varepsilon$

Where: Y = Operational Performance (OP), X = Supply Chain Management Functions (SCMF), M = Financing Dynamics (FD), $X \times M$ = interaction term between SCMF and Financing Dynamics, $\beta_0$ = constant (intercept), $\beta_1$ = coefficient for SCMF, $\beta_2$ = coefficient for Financing Dynamics, $\beta_3$ = moderation coefficient (interaction effect), $\varepsilon$ = error term. The moderation effect is assessed using $\beta_3$. A statistically significant $\beta_3$ ($p < .05$) indicates that Financing Dynamics significantly moderates the relationship between SCMF and Operational Performance.

## REFERENCES


1. Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99–120. https://doi.org/10.1177/014920639101700108
2. Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology, 51(6), 1173–1182. https://doi.org/10.1037/0022-3514.51.6.1173
3. Cheng, J., Bi, G., & Shahzad, U. (2024). Influence of dynamic capabilities and supply chain finance on supply chain effectiveness in environmental dynamism: A conditional process analysis. Operations Management Research, 17, 307–323. https://doi.org/10.1007/s12063-023-00425-5
4. Chopra, S., & Meindl, P. (2016). Supply chain management: Strategy, planning, and operation (6th ed.). Pearson.
5. Duan, W., Hu, H., & Zhang, Y. (2022). What determines the performance of small and medium-sized enterprises supply chain financing? A qualitative comparative analysis of fuzzy sets based on the technology–organization–environment framework. Frontiers in Psychology, 13, 976218. https://doi.org/10.3389/fpsyg.2022.976218
6. Hayes, A. F. (2018). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach (2nd ed.). Guilford Press.
7. Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30(3), 607–610. https://doi.org/10.1177/001316447003000308
8. Li, J., He, Z., & Wang, S. (2022). A survey of supply chain operation and finance with Fintech: Research framework and managerial insights. International Journal of Production Economics, 247, 108431. https://doi.org/10.1016/j.ijpe.2022.108431
9. Li, Y., Zhang, Y., & Geng, L. (2024). Digital finance, financing constraints and supply chain resilience. International Review of Economics & Finance, 96, 103545. https://doi.org/10.1016/j.iref.2024.103545
10. Lou, Z., Xie, Q., Shen, J. H., & Lee, C.-C. (2024). Does supply chain finance (SCF) alleviate funding constraints of SMEs? Evidence from China. Research in International Business and Finance, 67, 102157. https://doi.org/10.1016/j.ribaf.2023.102157
11. Mao, J., Xie, J., Gao, Y., Tang, Q., Li, Z., & Zhang, B. (2024). Navigating growth: The nexus of supply chain finance, digital maturity, and financial health in Chinese A-share listed corporations. Sustainability, 16(13), 5418. https://doi.org/10.3390/su16135418

12. Sarpong, K. O., & Oppong, M. (2023). Contributions of financial resource availability on green supply chain management and firm environmental performance in manufacturing firms: Evidence from Kumasi Metropolis, Ghana. International Journal of Supply Chain and Logistics, 7(2), 92–107.
13. Wernerfelt, B. (1984). A resource-based view of the firm. Strategic Management Journal, 5(2), 171–180. https://doi.org/10.1002/smj.4250050207
14. Wetzel, P., & Hofmann, E. (2019). Supply chain finance, financial constraints and corporate performance: An explorative network analysis and future research agenda. International Journal of Production Economics, 216, 364–383. https://doi.org/10.1016/j.ijpe.2019.07.001
15. Wang, J., Zhang, Q., & Hou, P. (2022). Implications of credit default and yield uncertainty on supply chain's equilibrium financial strategy. Annals of Operations Research, 315(1), 507–533. https://doi.org/10.1007/s10479-022-04691-7
16. Wang, X., Zhao, J., Zhang, H., & Tang, X. (2022). The impact of the scale of third-party logistics guaranteeing firms on bank credit willingness in supply chain finance: An ERP study. Frontiers in Psychology, 13, 853888. https://doi.org/10.3389/fpsyg.2022.853888